Application No. 09/546,214 Amdt. Dated November 18, 2003 Reply to Office action of July 18, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An image processing apparatus for detecting posture, or posture and position of an a three dimensional object comprising:

an image capturing device;

a memory storing <u>a plurality of</u> reference models created based on image data of a reference object captured by said image capturing device in a plurality of <u>angular rotation</u> directions, and storing information of the capturing directions to be respectively associated with said reference models, said reference object being the <u>an</u> object of detection or an object having a shape identical to that of the object of detection; and

a processor to perform matching processing on image data containing an image of the object of detection captured by said image capturing device, amongst a plurality of three-dimensional objects of detection, all at various angular rotation positions, with said plurality of reference models which have been stored in the memory to select an image of an object matched with one of said reference models, and to obtain posture, or posture and position of the object based on the selected image of the object, said one reference model and the information of the said respective direction associated with said one reference model.

- 2. (Currently Amended) An image processing apparatus according to claim 1, wherein said reference models comprises a part of the image data of the reference object.
- 3. (Original) An image processing apparatus according to claim 1, wherein said reference models are obtained by processing the image data of the reference object.
- 4. (Original) An image processing apparatus according to claim 1, wherein said image capturing device comprises a camera for capturing two-dimensional image data.
- 5. (Original) An image processing apparatus according to claim 4, wherein said image data of the reference object are captured by said image capturing device from a predetermined distance.
- 6. (Original) An image processing apparatus according to claim 1, wherein said image capturing device comprises a visual sensor for capturing three-dimensional image data.
- 7. (Original) An image processing apparatus according to claim 6, where in said image data containing an image of the object of detection captured by said visual senor is two-dimensional arrangement data including distance information from the object of detection to the



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image capturing device, a part of said two-dimensional arrangement data or a set of distance data.

- Ship
- 8. (Previously Presented) An image processing apparatus according to claim 1, wherein said image capturing device is attached to a robot.
- 9. (Currently Amended) An image processing apparatus according to claim 1, wherein said image data of the reference object are captured in a place different from a place where the detection of the object is performed, and supplied to the image processing apparatus on line or effline off line.